

Application No.: 10/809,896

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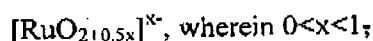
AMENDMENTS TO THE CLAIMS:

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*Please amend the claims as follows:*

/A.Z./ 02/03/2009

1. (Currently amended) A colloidal ruthenic acid compound containing a ruthenic acid nanosheet, said ruthenic acid nanosheet having a thickness of not more than 1 nm, represented by the formula (1):



~~wherein said ruthenic acid nanosheet is in the form of separated particles.~~

2. (Cancelled)

3. (Currently amended) A layered ruthenic acid intercalation compound comprising a layered structure of the ruthenic acid nanosheets, each having a thickness of not more than 1 nm, represented by the formula (1):  $[\text{RuO}_{2+0.5x}]^x$ , ~~wherein~~  $0 < x < 1$ , ~~in accordance with claim 1 and~~ alkylammonium,

said layered ruthenic acid compound having an X-ray diffraction peak intensity at a (00L) plane ( $L = 1$  to  $n$  when  $0 \leq 0(\text{CuK}\alpha) \leq 90^\circ$ ,  $n$  is determined depending on a basal interplanar spacing and  $5 \leq n \leq 35$ ).

4-5. (Cancelled)

6. (Original) An electrochemical device having an electrode comprising the ruthenic acid nanosheet in accordance with claim 1.

7. (Currently amended) A method of producing a ruthenic acid nanosheet comprising the steps of:

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(a) mixing ruthenium oxide and an alkali metal compound and sintering or melting the resulting mixture to obtain a layered alkali metal-ruthenate compound containing a ruthenic acid nanosheet having a thickness of not more than 1 nm;

(b) treating said layered alkali metal-ruthenate compound in an acidic solution to exchange at least part of alkali metal with proton to obtain a protonic layered ruthenic acid hydrate;

(c) reacting said protonic layered ruthenic acid hydrate with alkylammonium or alkylamine to obtain a layered alkylammonium-ruthenic acid intercalation compound; and

(d) mixing said layered alkylammonium-ruthenic acid intercalation compound with a solvent to obtain a colloid containing a ruthenic acid nanosheet having a thickness of not more than 1 nm ~~in the form of separated particles.~~

8. (Original) A method of producing the ruthenic acid nanosheet in accordance with claim 7, wherein ruthenium oxide and alkali metal salt are mixed and the resulting mixture is sintered at 700-900 °C in the step (a).

9. (Original) A method of producing the ruthenic acid nanosheet in accordance with claim 7, wherein ruthenium oxide and alkali metal hydroxide are mixed and the resulting mixture is melted at 500-700 °C in the step (a).

10. (Original) A method of producing the ruthenic acid nanosheet in accordance with claim 7, wherein said protonic layered ruthenic acid hydrate is reacted with alkylammonium represented by  $(R)_mNiL_{4-m}$  or  $(R)_{m-p}(R')_pNH_{4-m}$  (where R and R' are  $CH_3(CH_2)_q$ , respectively,  $m = 0$  to 4,  $p = 0$  to 3 and  $q = 0$  to 18) in the step (c).

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11. (Original) A method of producing the ruthenic acid nanosheet in accordance with claim 7, wherein said protonic layered ruthenic acid hydrate is reacted with alkylamine represented by  $(R)_mNH_{3-m}$  or  $(R)_{m-p}(R')_pNH_{3-m}$  (where R and R' are  $CH_3(CH_2)_q$ , respectively,  $m = 0$  to 3,  $p = 0$  to 2 and  $q = 0$  to 18) in the step (c).

12. (Original) A method of producing the ruthenic acid nanosheet in accordance with claim 7, wherein said layered alkylammonium-ruthenic acid intercalation compound is mixed with at least one solvent selected from the group consisting of water, alcohol, acetonitrile, dimethyl sulfoxide, dimethylformamide and propylene carbonate to obtain a colloid in the step (d).

13. (Cancelled)